

# **State of New Hampshire Department of Transportation**

**Senate Capital Budget Committee**

**HB25 Presentation**

**May 1, 2017**

# STATE OF NEW HAMPSHIRE

## CAPITAL IMPROVEMENT PROJECT REQUEST

FISCAL YEARS 2018-2019

FORM 1A

General Fund HB35

Section I XXII-A

**AGENCY**

ACTIVITY / DIVISION      096      Department of Transportation

PROJECT-TITLE / NAME      964010      Division of Aeronautics, Rail & Transit

PROJECT-TITLE / NAME      Public Transit Bus & Facility Matching Funds

**PRIORITY #**

1

**Capital Budget Request**

Site Acquisition (a)	
Site Improvement / Preparation (b)	
Construction (c)	
Utilities (d)	
Architect / Engineering (e)	
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	1,241,881
Other (h)	
<b>Total Capital Budget Request</b>	<b>1,241,881</b>

**Other Information**

Total Square Footage:	
Estimated Useful Life:	7 Years

**Related Annual Operating Budget Expenditures / Savings Estimates**

Expenditures		Savings
Permanent Personnel Services (a)		
Other Personnel Services (b)		
Current Expense (c)		
Equipment (d)		
Travel (e)		
Other (f)		
<b>Total Expenditures / Savings Estimates</b>		

Accounting Unit: \_\_\_\_\_

Will these amounts be consistent each year? ☐

**Capital Budget Criteria (See Instructions)**

Requirement Code:	A, B, C or D	B	C
Definition Code:	A, B, C, D, or X	F	G
Funding Percentages by Source:	G, F, H, O		
G = General	F = Federal		
H = Highway	O = Other		
An Information Technology Project must be part of your IT Plan. Project #			

**Project Justification (Be Concise)**

This request provides matching funds for: (1) The acquisition of public transit vehicles, facilities, and infrastructure, including bicycle & pedestrian infrastructure, for local public transit agencies in Manchester, Nashua, Dover-Portsmouth, Derry-Salem, Hanover-Lebanon, Concord, Laconia, Claremont, Berlin-Lancaster-Littleton, and Keene, and (2) the acquisition of vehicles for non-profit agencies that provide transportation for elderly individuals and individuals with disabilities. Federal funds provide 80% of the capital needs for transit projects listed above. The requested State Capital match will provide 10% (or 1/2 of the required match if different) and local funds will provide the remaining required match. State participation enables transit providers to leverage Federal capital funds for needed vehicle replacements and facility improvements that might not otherwise be available. Public transportation provides access to jobs and critical services for New Hampshire residents, promoting economic development and mobility for all citizens.

Requested funds will be used to match formula apportioned funds from the Federal Transit Administration grants programs including FTA Section 5339 Capital Bus & Bus Facility Program funds, FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities funds, and FTA Section 5307 Urbanized Area Formula Program funds as well as any discretionary Federal grants made available for transit capital projects. Without State Capital match many transit projects would be delayed due to the inability to raise the required 20% non-federal match on capital projects. Funding for rural transit systems is included in the DOT Operating Budget GL Accounting Unit 2916; Public Transportation, Class 072: Grants Federal. Urban transit systems receive federal funds directly from the Federal Transit Administration and these federal funds and local matching funds are not included on this form.

**Contact Name:** Patrick C. Herlihy, Director of Aeronautics, Rail and Transit

**Name:** Victoria F. Sheehan

**Telephone Number:** 603-271-2449

**Date:** 5/16/2016



## 2018-2019 Biennium: Public Transit Request

This request provides matching funds for: (1) The acquisition of public transit vehicles, facilities, and infrastructure, including bicycle & pedestrian infrastructure, for local public transit agencies in Manchester, Nashua, Dover-Portsmouth, Derry-Salem, Hanover-Lebanon, Concord, Laconia, Claremont, Berlin-Lancaster-Littleton, and Keene, and (2) the acquisition of vehicles for profit agencies that provide transportation for elderly individuals and individuals with disabilities. Federal funds provide 80% of the capital needs for transit projects listed above.

Federal funds provide at least 80% of the capital needs for transit projects listed above. The requested State Capital match will provide 10% (or ½ of the required match) and local funds will provide the remaining required match. State participation enables transit providers to leverage Federal capital funds for needed vehicle replacements and facility improvements that might not otherwise be available. Public transportation provides access to jobs and critical services for New Hampshire residents, promoting economic development and mobility for all citizens. Requested funds will be used to match formula apportioned funds from the Federal Transit Administration grants programs including FTA Section 5339 Capital Bus & Bus Facility Program funds, FTA Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities funds, and FTA Section 5307 Urbanized Area Formula Program funds. Without State Capital match many transit projects would be delayed due to the inability to raise the required non-federal match on capital projects. Funding for rural transit systems are included in the DOT Operating Budget GL Accounting Unit 2916; Public Transportation, Class 072: Grants Federal. Urban transit systems receive federal funds directly from the Federal Transit Administration and these federal and local matching funds for urban transit systems, totaling \$6,002,654 and are not in the DOT Operating Budget.

2018-219 Biennium		State Capital Funds Requested	Local Match Required	Federal Funds Leveraged	Total Project Costs
CART	2 ADA paratransit vehicles	\$ 20,000	\$ 20,000	\$ 160,000	\$ 200,000
COAST	11 heavy-duty midlife vehicle overhauls, 2 45' used motor coaches, 2 ADA accessible minivans, 10 bus shelters	\$ 76,750	\$ 76,750	\$ 614,000	\$ 767,500
Manchester Transit	4 30' heavy-duty transit buses, 5 12&2 ADA paratransit buses	\$ 368,667	\$ 368,667	\$ 2,949,338	\$ 3,686,672
Nashua Transit	4 30' heavy-duty transit buses, 1 ADA paratransit bus	\$ 201,544	\$ 201,544	\$ 1,612,355	\$ 2,015,444
Advance Transit	4 35' heavy-duty low floor buses, 4 30' medium-duty transit buses, 1 ADA paratransit bus, 5 bus shelters	\$ 256,078	\$ 256,078	\$ 2,048,626	\$ 2,560,782
Belknap-Merrimack Community Action Program (Concord Area Transit & Winnepesaukee Transit)	1 30' medium-duty bus, 3 ADA paratransit buses	\$ 46,441	\$ 46,441	\$ 371,530	\$ 464,412
Community Alliance Transportation Services	2 accessible cutaway vehicles & 2 accessible vans	\$ 24,000	\$ 24,000	\$ 192,000	\$ 240,000
Tri-County Community Action Program (North Country Transit & Carroll County Transit)	5 small cutaway transit buses & 1 24-passenger medium-duty transit bus	\$ 58,900	\$ 58,900	\$ 471,200	\$ 589,000
VNA @ HCS (Keene)	3 27' transit buses	\$ 19,500	\$ 19,500	\$ 156,000	\$ 195,000
Public Transit Bike-Ped infrastructure	Bicycle & pedestrian infrastructure improvements including bicycle racks, passenger shelters, way finding signage, curb cuts for improved accessibility	\$ 20,000	\$ 20,000	\$ 160,000	\$ 200,000
Statewide 5310 providers	10% match for vehicles to be solicited through statewide (open solicitation) for non-profits providing service to seniors & individuals with disabilities (approximately 20-24 vehicles)	\$ 150,000	\$ 150,000	\$ 1,200,000	\$ 1,500,000
<b>Total</b>		<b>\$ 1,241,881</b>	<b>\$ 1,241,881</b>	<b>\$ 9,935,048</b>	<b>\$ 12,418,810</b>

**Total funds requested for the 2018-2019 Biennium:**

**\$1,241,881**

**Total vehicles requested for 2018-2019 Biennium:**

**77 (approximately)**





2004 Bus corrosion underneath



2004 Bus w/ corrosion on entry door



2004 Gillig exterior

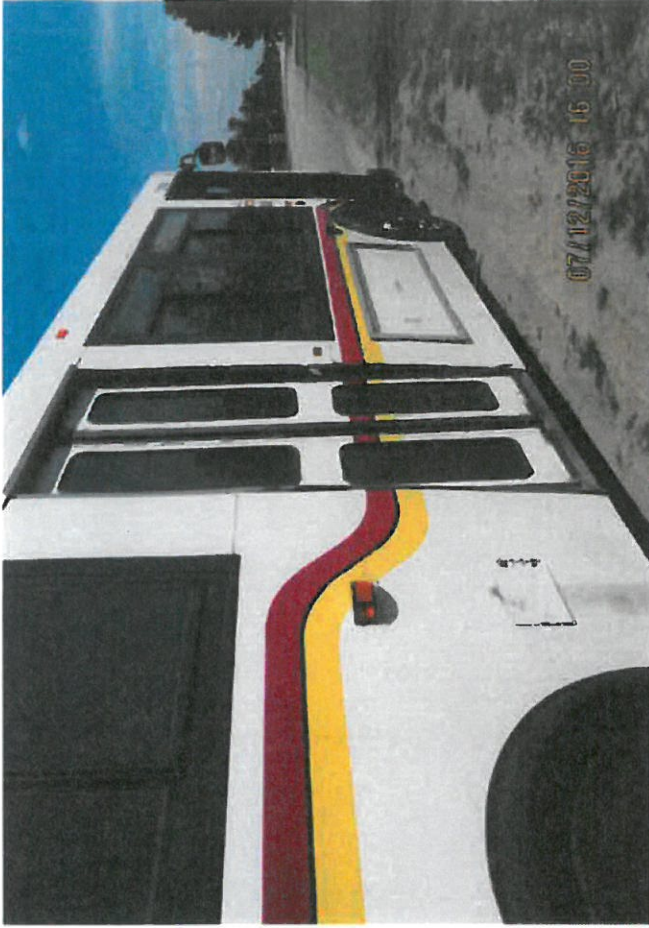


2004 Bus w/ corrosion on frame





2003 Orion Bus



2003 Orion Bus



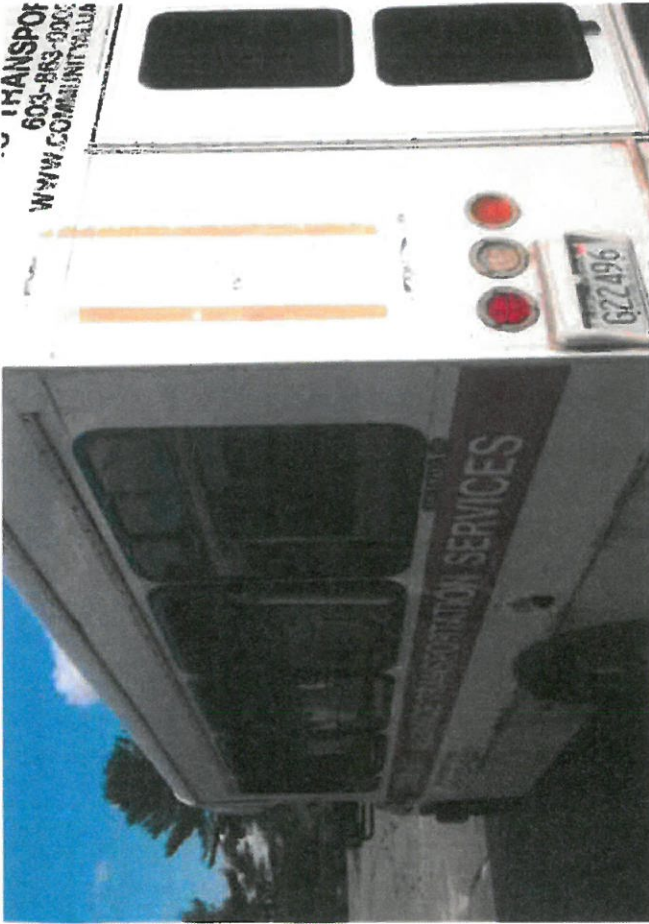
2011 Cutaway Paratransit--rust



2003 Orion Bus



Various Public Transit Agencies



Community Alliance: 2010 Startrans rust & high mileage



Keene City Express: 2007 bus with 125,000+ miles



CART Bus Salem-Derry: 2009 Arboc with 150,000+ miles and 7.1 mpg



Tri-County CAP Berlin: 2008 Ford w/high mileage & wear & tear

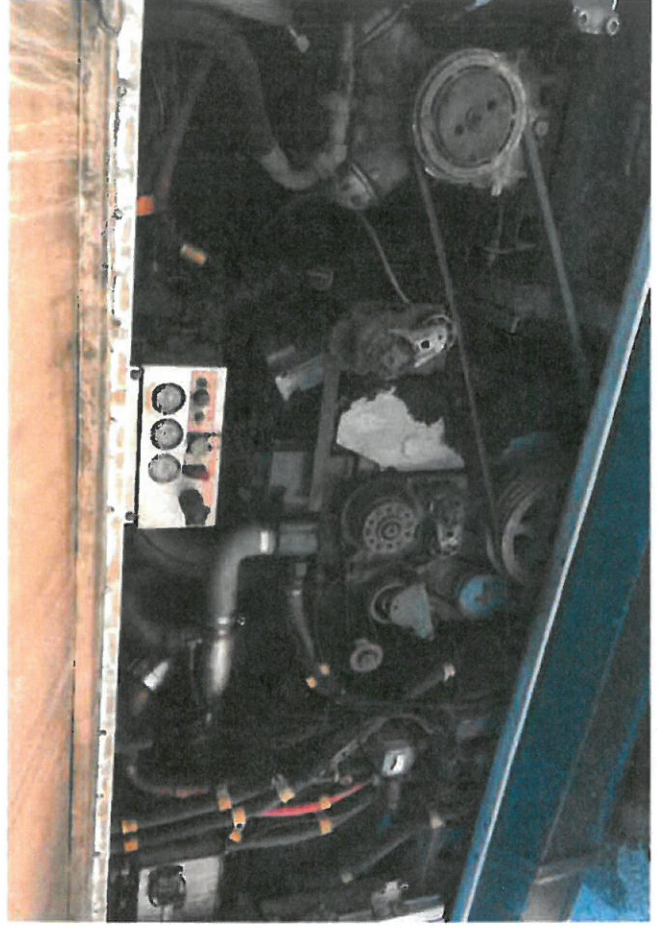




2009 ADA paratransit minivan with 220,000+ miles



Interior of city bus to be overhauled



Engine to be overhauled



2006 Gillig bus with cosmetic repairs made, but heavy daily use and wear & tear



2009 ADA paratransit bus with cosmetic repairs made, but heavy daily use and wear & tear



**HB25 Section 1 XXII-B.**

**2018-2019 CAPITAL BUDGET REQUEST**

**REPAIRS TO DAMAGED GRANITE ARCH STRUCTURES IN  
WESTMORELAND AND WALPOLE**

**On the NH DOT owned  
Cheshire Branch railroad corridor**

**Prepared By:**

**NH DOT Bureau of Rail & Transit**

**February 28, 2017**

## **REPAIRS TO DAMAGED GRANITE ARCH STRUCTURES IN WESTMORELAND AND WALPOLE**

The Department of Transportation is requesting Capital Budget funds to repair two large damaged granite arch culverts on the Cheshire Branch Railroad Corridor that are major drainage conveyances under high embankments. The Department has had to cleanup and make temporary repairs to three granite arch culverts in Walpole and Westmoreland at a cost of over \$700,000 in the last 10 years.

The Department is responsible for maintaining these two State owned granite arches, located in Westmoreland and Walpole, because they are major drainage structures under the railroad corridor. The Department has no funds available in their current budget to complete the repairs required to stabilize these granite arch structures against further collapse. The Department requested funding for these repairs over the last two budget cycles, but they were not approved. The Department is making a special request for these funds at this time so repairs can be made in the next year while the costs are relatively low compared to the cost of major reconstruction or replacement in the future if more damage occurs during storm events. The Department is also concerned about the potential for downstream flooding and damage if either of these arches collapses.

### **PROJECT OVERVIEW**

The Department is requesting funding to repair these two granite arches because the Department considers them to be in unstable condition and potential hazards to downstream properties during severe storm events as have occurred in the past.

The critical part of granite arches are the foundation blocks that support the arch. At these two arches the foundation blocks are already partially undermined and susceptible to further erosion. If these blocks become totally undermined by water flow and become loose or fall out, then the blocks above become unstable and begin to move and eventually fall out causing that portion of the arch to collapse.

A partial or complete collapse of an arch during a storm event creates a serious situation because it can create a blockage in the arch causing water to backup and impound on the upstream side of the 30-40 foot high embankment. The railroad embankments were not built to be a dam or to impound water and are susceptible to seepage and collapse due to water flow through the embankments. If the water does build to the top of the embankment and begins flowing over the top, then it will begin to erode the embankment causing large amounts of material and water to flood downstream causing significant property damage and possibly loss of life.

### **WESTMORELAND GRANITE ARCH B100.06**

Westmoreland Granite Arch B100.06 partially collapsed in 2003, 2007, 2010, 2011 and 2013. The Department removed the debris from the brook that fell in during the collapses, installed a concrete floor in the arch in 2008 and performed temporary work to stabilize the outlet end of the arch over the last 10 years. These interim measures were done to stabilize the arch and in anticipation of future funding to construct a new outlet header at the arch to keep it from collapsing during heavy rain falls. To date that funding has not been provided. The following are photos of the 2007 arch collapse, additional damage in subsequent storms, photos of the flooding downstream at the Route 12 road bridge in 2013 and current photos of the unstable arch.



**WESTMORELAND GRANITE ARCH B100.06**



**View of 2007 Arch Collapse**



**View of 2011 Arch Collapse**



**WESTMORELAND GRANITE ARCH B100.06**



**View of Arch Damage from July 2013 Storm**



**Close-up View of Arch Damage from July 2013 Storm**



**WESTMORELAND GRANITE ARCH B100.06**



**View of Downstream Flood Damage at Route 12 from July 2013 Storm**



**View of Downstream Flood Damage at Route 12 from July 2013 Storm**

**WESTMORELAND GRANITE ARCH B100.06**



**View of Undermined Right Side of Arch**



**View of Undermined Left Side of Arch**



## WESTMORELAND GRANITE ARCH B100.06

After the collapse in 2007, the Department installed a concrete floor in 90% of the arch in 2008 to keep the inlet end of the arch from becoming undermined. The floor could not be installed at the outlet end because the arch was considered too unstable to have workers in that portion of the arch.

After the collapse in 2013, the Department, NH DES, NH Emergency Management and other State and Federal agencies evaluated this granite arch and looked at all of the options for resolving the arch collapse problem; repair the outlet end, remove the arch entirely, add another culvert beside the arch, put in a bridge over the brook or lower the embankment to create a spillway. It was determined that the lowest cost effective solution and best engineering remedy for the downstream drainage issues and concerns was to maintain the granite arch in place and to construct a concrete header on the remaining portion of the outlet end and complete restoration of the site. The Department has completed some of the lower cost work to stabilize conditions at the site as events have occurred. The work that remains now for which the Department is seeking funding, is the construction of the outlet header to prevent future problems and damage.

The majority of the requested funds will be used to construct a new headwall on the outlet end of the Westmoreland granite arch to permanently stabilize the arch. The remaining funds will be used for engineering, plan preparation, DES permits, constructing rip rap outlet side slopes and completing the permanent restoration of the embankment slopes over the arch.

The following is a breakdown of the cost estimate for the work included in this funding request to complete repairs to the Westmoreland granite arch.

### WESTMORELAND ARCH REPAIR COST SUMMARY

Engineering, design and permitting	\$ 60,000
Brook diversion and pollution control	\$ 20,000
Construct concrete outlet header	\$ 275,000
Construction of rip rap outlet slopes	\$ 15,000
Embankment grading and restoration	\$ 20,000
Embankment ground cover restoration	<u>\$ 10,000</u>
TOTAL	\$ 400,000



## **WALPOLE GRANITE ARCH B106.65**

Walpole Granite Arch B106.65 is a twin arch that has deteriorated at the outlet end and inside a portion of the north arch. The previous railroad owner made substantial repairs to the outlet end of the arch during the time they owned the corridor. In the 2012 inspection of the arch, the Department found that the granite block spillway wall at the outlet end had many loose blocks and some were already missing. Funds were requested at that time for repairs, but none were provided.

In 2014 during a reinspection of the arch following the 2013 flooding in the area, the Department found that several additional granite blocks had become dislodged at the outlet and some had been washed away. In addition, several of the blocks in the north arch were undermined and beginning to fall out. The loss of these foundation blocks inside the arch and at the spillway wall have destabilized the arch structure and may eventually cause a partial collapse similar to what happened at the Westmoreland granite arch if not remedied. In 2015, the Department performed a temporary repair to reset some granite blocks and construct a partial concrete toe wall in the north arch to stabilize the arch's foundation blocks. No repairs were made to the spillway blocks due to the lack of funding. The work inside the arch was a temporary repair until funding could be obtained to reestablish the concrete floor in the north arch, construct a new outlet spillway wall, and to repair the other arch structure issues so the arch would be in a permanent stable condition. To date that funding has not been provided.

The following are photos that were taken in 2012, 2014 and 2016 showing the arch issues and the temporary repair inside the arch, the current condition of the arch and issues remaining to be completed to stabilize the arch structure.



**Current View of Arch Showing Deterioration at Outlet End**



**WALPOLE GRANITE ARCH B106.65**



**View of Undermined Granite Blocks in 2014**



**View of Reset Granite Blocks and Concrete Completed in 2015**



**WALPOLE GRANITE ARCH B106.65**



**View of South Side of Outlet Spillway Wall Showing Deterioration**



**View of Missing Floor Slabs inside the North Arch**

## WALPOLE GRANITE ARCH B106.65

The Department has completed some emergency temporary repairs at this arch over the last 3 years at a cost of \$20,000 in an effort to prevent possible collapse of the arch. The Department has been unable to complete long term stabilization required at this arch due to lack of funding.

The majority of the requested funds will be used to construct a concrete floor at the end of the north arch and a new concrete spillway wall at the outlet end of both arches. The work is required to prevent future damage and possible collapse of the arch, the cleanup cost of which could exceed \$700,000. The remaining funds will be used for engineering, plan preparation, NH DES permits, constructing site access and constructing rip rap outlet protection. The Department has made emergency repairs in the past, but major repairs still remain to be made at this arch to ensure that the arch is stabilized and not in danger of future deterioration and possible collapse during a severe storm event.

The following is a breakdown of the costs for the work included in this funding request to repair the Walpole granite arch.

### WALPOLE ARCH REPAIR COST SUMMARY

Engineering, design and permitting	\$ 10,000
Brook diversion and pollution control	\$ 10,000
Construct concrete floor slab	\$ 15,000
Construct concrete spillway wall	\$ 50,000
Place rip rap at outlet	<u>\$ 15,000</u>
 TOTAL	 \$ 100,000



Highway Fund  
HB35 Section 2 II-A

FORM 1A

STATE OF NEW HAMPSHIRE  
CAPITAL IMPROVEMENT PROJECT REQUEST  
FISCAL YEARS 2018-2019

PRIORITY # 1

AGENCY	CODE	NAME
ACTIVITY / DIVISION	096	New Hampshire Department of Transportation
PROJECT-TITLE / NAME	960515	Highway Maintenance District 1
		Lisbon 114 - New Patrol Shed Facilities

Capital Budget Request	
Site Acquisition (a)	350,000
Site Improvement / Preparation (b)	1,600,000
Construction (c)	30,000
Utilities (d)	100,000
Architect / Engineering (e)	
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
Total Capital Budget Request	2,080,000

Other Information	
Total Square Footage:	6400 sf
Estimated Useful Life:	25

Related Annual Operating Budget Expenditures / Savings Estimates	
Expenditures	Savings
Permanent Personnel Services (a)	
Other Personnel Services (b)	
Current Expense (c)	
Equipment (d)	
Travel (e)	
Other (f)	
Total Expenditures / Savings Estimates	42,812
Accounting Unit: 3007 Highway Maint.	42,812
Will these amounts be consistent each year?	Yes

Capital Budget Criteria (See Instructions)	
Requirement Code: C or D	A
Definition Code: D, or X	A
Funding Percentages by Source:	H
G = General	
F = Federal	
H = Highway	
O = Other	
An Information Technology Project must be part of your IT Plan. Project #	

Project Justification (Be Concise)

Construct new Highway Maintenance Patrol Section Facilities in Lisbon, including patrol shed and salt shed. Constructed in 1902, this facility does not meet current building codes, is obsolete, potentially unsafe, and is NOT energy efficient. Due to its historic significance, this structure is not a candidate for renovation. The new facilities can be sited on the existing lot due to the recent acquisition of the adjacent lot.

Preliminary Plans: Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

Contact Name:	Philip Beaulieu - District 1 Engineer	Telephone Number:	788-4641
Name:	Victoria F. Sheehan	Commissioner	Date: 5/16/16

**1) Why the project is necessary:**

The existing PS114 Lisbon facility was constructed in 1902 and is obsolete, potentially unsafe, not energy efficient and is under sized to meet level of service requirements. The current facility includes 1-bay vehicle storage that doesn't accommodate a state truck with wing installed, 1-room crew quarters and salt storage. Current facility is not capable of storing current maintenance vehicles and does not meet current building codes. The proposed new facility can be sited on the existing property. Utility and computer system upgrades are included.

The current salt storage is located in one bay of the building with insufficient capacity to store at least 1-years' worth of salt. The floor of the salt bay is below the exterior ground level creating issues with drainage at the entrance to the bay.

**2) What the project is replacing or adding on to:**

This project will construct a new right-sized facility that will include crew quarters, bathrooms, foremen office, and vehicle storage bays for trucks. The crew currently includes 5 full-time NH DOT District 1 employees with (3) 3-5 Ton plow trucks. The current facility is too small to allow for crew members to take a break without using space not intended for that purpose. The current facility has one crew space and the foreman uses a portion of the crew quarters as an office which is not secure or conducive for employee relations.

In the winter, only 1 plow truck can be stored inside with the other trucks stored outside. Trucks equipped with dry rock salt pre-wet systems can freeze-up when stored outside. Newer plow trucks equipped with vehicle emissions controls can also have temperature related issues if not stored in an above freezing environment.

Existing facility will be demolished as part of the project and was determined to have no adverse effect on historic properties.

**3) A brief description of what the project includes**

The project will include an 80-ft. by 80-ft. building that meets current building code requirements. Architectural/engineering analyses will define the building dimensions and utility accommodations similar to recent replacement NH DOT Highway Maintenance Facilities.

The project will also include a 70'x55' salt storage building using the standard DOT design to reduce engineering costs and sized to store at least 1-year of salt.

**4) Any back up information**



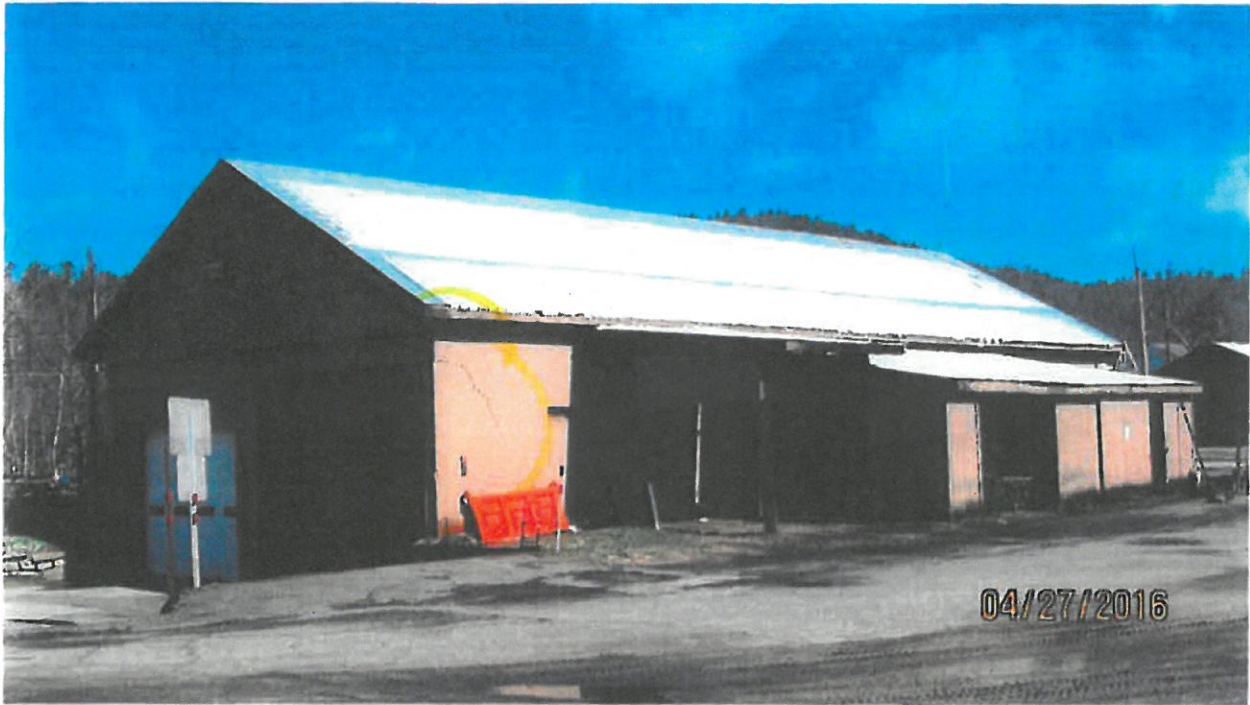


Photo 1: View of backside of building showing the salt storage bay (open) and vehicle storage bay (with garage door). Also visible is a significant crack in the exterior masonry wall near the bay opening.



Photo 2: View of backside of building at the end near entrance to crew quarters showing significant damage.



Photo 3: View of the front end of the building and entrance into the crew quarters.



FORM 1A

**STATE OF NEW HAMPSHIRE  
CAPITAL IMPROVEMENT PROJECT REQUEST  
FISCAL YEARS 2018-2019**

**PRIORITY #** 2

PROJECT-TITLE / NAME	CODE	NAME
AGENCY	096	New Hampshire Department of Transportation
ACTIVITY / DIVISION	960515	Operations
PROJECT-TITLE / NAME		Statewide - Underground Fuel Tank Replacement

<b>Capital Budget Request</b>	
Site Acquisition (a)	
Site Improvement / Preparation (b)	
Construction (c)	1,900,000
Utilities (d)	
Architect / Engineering (e)	100,000
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
<b>Total Capital Budget Request</b>	<b>2,000,000</b>
<b>Other Information</b>	
Total Square Footage:	
Estimated Useful Life:	30

Related Annual Operating Budget Expenditures / Savings Estimates			
	Expenditures	Savings	
Permanent Personnel Services (a)			
Other Personnel Services (b)			
Current Expense (c)			
Equipment (d)			
Travel (e)			
Other (f)			
<b>Total Expenditures / Savings Estimates</b>			
Accounting Unit: <input type="text"/>			
Will these amounts be consistent each year? <input type="text"/>			
<b>Capital Budget Criteria (See Instructions)</b>			
Requirement Code: B, C or D		A	
Definition Code: C, D, or X		D	
Funding Percentages by Source:		H	100.00%
G = General	F = Federal		
H = Highway	O = Other		
An Information Technology Project must be part of your IT Plan. Project # <input type="text"/>			

### Project Justification (Be Concise)

The NH Department of Transportation currently has 40 fuel sites that have underground storage tanks and appurtenances. As the sites get beyond the life expectancy of the tanks and components, the potential for environmental issues, compliance and extensive repairs increases considerably. Prior Capital Improvement Projects (CIP) provided funding to bring many sites into environmental compliance; this CIP request continues that effort to replace the oldest and highest risk sites and to make structural improvements to sites near mid-life to prolong those sites' life span and to minimize potential environmental issues. Currently, 6 sites are planned for scheduled replacement with an average cost of \$325K.

**Preliminary Plans:** Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

Contact Name:	Caleb Dobbins - State Maintenance Engineer	Telephone Number:	271-2693
Name:	Victoria F. Sheehan	Commissioner	Date: 5/16/16

**1) Why the project is necessary:**

The NH Department of Transportation currently has 40 fuel sites that have underground storage tanks and appurtenances that are 25 years or older. As the sites get beyond the warranty and life expectancy of the tanks and components, the potential for environmental issues and extensive repairs increases considerably. Prior Capital Improvement Projects (CIP) provided funding to bring many sites into environmental compliance; this CIP request continues that effort to replace the oldest and highest risk sites and to make structural improvements to sites near mid-life to prolong those sites' life span and to minimize potential environmental issues.

**2) What the project is replacing or adding on to:**

The project will continue the recapitalization plan of the existing fuel system by reconstructing new fuel sites at different patrol shed locations throughout the state. In most situations the existing fuel site will be removed to accommodate the new tank(s) and appurtenances, however in some locations the existing tank(s) will remain and everything above the tank top will be replaced.

**3) A brief description of what the project includes**

The project will include reconstruction of single product (diesel) and two product (unleaded and diesel) fuel sites. The project will also allow the reconstruction of some sites, except the tank(s), for those sites that are still young enough where a tank top upgrade will extend the site life another 10 to 15 years while reducing the environmental risk considerably. The desire is to perform tank top upgrades and reconstruct as many fuel sites as allowed by available funding, in the respective State Fiscal Years (SFY) while generally keeping with the following priority list:

- 1) SFY 16-17 current available funding ~ \$800,000 – In calendar years (CY) 16-17 perform tank top upgrades (TTU) on Merrimack (UL & DS), Goffstown (DS), Chester (DS), and Chichester (DS); estimated cost \$200,000. In CY 17 perform TTU on Lancaster (UL & DS), Crawford (DS), and Lincoln (UL & DS); estimated cost \$200,000. Reconstruct Salem (UL & DS) in conjunction with the newly planned patrol and salt sheds, estimated cost \$350,000. Total estimated cost \$750,000
- 2) SFY 18-19 requested funding \$2,000,000 – In CY 18 perform (TTU) on Hampton (UL & DS), Canaan (DS), Henniker (DS), Durham (UL & DS & BO), Exeter (DS), and Allenstown (DS), estimated cost \$350,000. Reconstruct Lisbon (DS) in conjunction with the newly planned patrol and salt sheds; estimated cost \$300,000. CY 18 total estimated costs \$650,000. In CY 19 Reconstruct 4 to 5 single diesel sites from the following possible locations – Orford, Rumney, Marlow, Cornish, Greenville, Hollis, Hinsdale, Hancock, Pittsburg, Milan, and Jefferson to include engineering costs; estimated cost \$1,300,000. Total estimated cost \$1,950,000. Other sites may be considered, as conditions dictate at that time.

**4) Any back up information**

1.) DOT is doing ultrasonic testing on steel double wall tanks being removed this year that exceed 25 years old to better assess the physical condition and departments risk with older steel tanks in the ground.

2.) New EPA regulations for tri-annual inspections and integrity (leak) testing of all sumps would require improvements to tank tops and sumps if they don't pass testing. Fuel personnel completed visual inspections of sites without recent tank top upgrades or reconstruction and assessed potential



issues that could be encountered during testing. This evaluation guided the prioritization of tank top upgrades on sites installed between 1993 and 2005.



Photo 1: Chichester – Drive pad with extensive damage and no positive limiting barriers (PLB's) in concrete. Increases risk of water getting into sumps and spills reaching subsurface soils. This is representative of some sites current conditions or potential future conditions without tank top upgrades or replacements.



Photo 2: Merrimack – Piping sump with water in the bottom causing significant damage to the piping components. Tank top upgrades will replace all piping components, sumps, tank pads and drive pads, extending the life of sites and significantly reducing short and long term maintenance requirements.



Photo 3: Dover Turnpikes – Dual product fuel site with undersized drive and tank pads with cracks prior to tank top upgrades in 2015, representative of the layout and condition of many older DOT sites .





Photo 4: Dover Turnpikes – Fuel site after 2015 tank top upgrade with new sumps, manholes, drive pad with PLB's and tank pad.



Photo 5: Northwood – Example of a full tank top upgrade or full replacement for a single dispenser site.

# Section 2 II-C

FORM 1A

## STATE OF NEW HAMPSHIRE

### CAPITAL IMPROVEMENT PROJECT REQUEST

FISCAL YEARS 2018-2019

PRIORITY # 3

AGENCY	CODE	NAME
ACTIVITY / DIVISION	096	New Hampshire Department of Transportation
PROJECT-TITLE / NAME	960515	Highway Maintenance Statewide
		Statewide Salt Sheds

Capital Budget Request	
Site Acquisition (a)	100,000
Site Improvement / Preparation (b)	1,400,000
Construction (c)	
Utilities (d)	
Architect / Engineering (e)	160,000
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
<b>Total Capital Budget Request</b>	<b>1,660,000</b>

Other Information	
Total Square Footage:	Varies
Estimated Useful Life:	25

Related Annual Operating Budget Expenditures / Savings Estimates		
Permanent Personnel Services (a)	Expenditures	Savings
Other Personnel Services (b)		36,661
Current Expense (c)		
Equipment (d)		
Travel (e)		
Other (f)		
<b>Total Expenditures / Savings Estimates</b>		<b>36,661</b>
Accounting Unit:	3007 Highway Maintenance	Yes
Will these amounts be consistent each year?		

Capital Budget Criteria (See Instructions)		
Requirement Code: C or D	B	
Definition Code: D, or X	A	
Funding Percentages by Source:	F, H, O	100.00%
G = General	G, F, H, O	
H = Highway	G, F, H, O	
O = Other	G, F, H, O	
An Information Technology Project must be part of your IT Plan. Project #		

#### Project Justification (Be Concise)

Currently the Department of Transportation cannot store a season's worth of salt at all patrol shed locations. Ability to store ample amount of material will save funds due to being able to purchase materials and store them when the best price is available. Environmental regulations also require that all salt be stored under cover. Design and construct salt sheds statewide.

Preliminary Plans: Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

Contact Name:	Caleb Dobbins - State Maintenance Engineer	Telephone Number:	271-2693
Name:	Victoria F. Sheehan	Date:	5/16/16
	Commissioner		



**1) Why the project is necessary:**

The department currently cannot store a season's worth of salt at all patrol shed locations and some sheds are reaching the end of their useful life, requiring significant maintenance to maintain function and safety. The ability to store ample salt will save funds due to being able to purchase materials and store them when the best price is available. Environmental regulations also require that all salt be stored under cover.

The department's standard high arch gambrel design allows delivery of salt to generally occur within the shed due to high door opening, limiting the potential environmental impacts from salt operations.

**2) What the project is replacing or adding on to:**

The project will construct new stand-alone salt buildings at different patrol shed locations throughout the state. In most situations the existing buildings will be demolished to accommodate the new structures, however in some locations the existing structure may remain depending on site layout and condition of the structure.

**3) A brief description of what the project includes**

The project will include construction of stand-alone salt buildings (4,000 sf to 11,500 sf) with lean-to cold storage and/or spreader rack bays on either side as additional alternates within the bidding process. The project will design and construct as many salt sheds as allowed by available funding while generally keeping with the following priority list:

- 1) D2 – Franklin (211) – Medium Shed – Shed is 44 years old and current capacity is 2000 tons. Current usage is almost 1900 tons per year, however the structure is in critical need of replacement to maintain function. Side walls are blown out in some locations and steel supports in roof have shown significant loss due to the corrosive environment.
- 2) D1 – Pinkham (113-P) – Medium Shed – Shed is 52 years old current capacity is 1650 tons. Current usage is around 1500 tons per year, however the structure is in critical need of replacement to maintain function. Roof has holes in many locations, allowing precipitation to get into the salt pile reducing the quality of the salt and creating chunks in the pile.
- 3) D3 – Loudon (316) – Medium Shed – Shed is 30 years old and current capacity is only 1,000 tons. Current usage is around 1050 tons per year and the ten year plan includes multiple projects that will expand sections of the Route 106 corridor and intersections in Loudon that this facility maintains. Replacement is critical to be able to store a years' worth of salt now and into the future as the demands of this corridor increase.
- 4) D1 – Milan (106) – Small Shed – Shed is 42 years old and current capacity is only 500 tons. Annual usage is over 800 tons per year. The limited capacity requires the shed to store some material outside to maintain an adequate amount of material on hand to respond to significant storm events. Replacement is critical to be able to store a years' worth of salt undercover and maintain function due to an aging building.
- 5) D2 – Bristol – Medium Shed – Shed is 45 years old and current capacity is 1500 tons. Annual usage is around 2100 tons per year. Replacement is critical to be able to store a years' worth of salt undercover and maintain function due to an aging building.
- 6) D3 – Orford – Medium Shed – Shed is 40 years old and current capacity is 1700 tons. Annual usage is almost 2200 tons per year. Replacement is critical to be able to store a years' worth of salt undercover and maintain function due to an aging building.

- 7) D1 – Whitefield – Small Shed – Shed is 31 years old and current capacity is only 500 tons. Annual usage is over 1000 tons per year. Replacement is critical to be able to store a years' worth of salt undercover.
- 8) D3 – Belmont

**4) Any back up information**

Most recent bid results have shown total construction costs up to \$106 per sf for the departments standard High Arch Gambrel Salt building. Based on these numbers we would estimate anywhere from \$410,000 to \$960,000 for construction depending on the size of the building and addition of side storage buildings.



Photo 1: Franklin 211 – Front Elevation



Photo 2: Franklin 211 – Sidewall starting to blow out and temporary braces installed.





Photo 3: Pinkham 113 – Front and Side Elevation, Roof in disrepair.



Photo 4: Pinkham 113 – Temporary Buttresses supporting bowed rear wall.



Photo 5: Loudon 316 – Front Elevation.



Photo 6: Loudon 316 – Sand fill used to hold push walls in place.





Photo 7: Milan 106 – Front and side elevation.



Photo 8: Milan 106 – Sand fill used to hold failed rear wall in place and makeshift anchors keeping walls in place.



Photo 9: Bristol 206 – Front Elevation



Photo 10: Bristol 206 – Temporary braces holding side and rear walls in place.



Section 2 II - D

FORM 1A

**STATE OF NEW HAMPSHIRE**  
**CAPITAL IMPROVEMENT PROJECT REQUEST**  
**FISCAL YEARS 2018-2019**

**PRIORITY #** 4

<b>AGENCY</b>	<b>CODE</b>	<b>NAME</b>
<b>ACTIVITY / DIVISION</b>	096	New Hampshire Department of Transportation
<b>PROJECT-TITLE / NAME</b>	960515	Highway Maintenance District 5
		Manchester 527 - Addition to Patrol Shed

Capital Budget Request	
Site Acquisition (a)	
Site Improvement / Preparation (b)	
Construction (c)	
Utilities (d)	
Architect / Engineering (e)	120,000
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
<b>Total Capital Budget Request</b>	<b>120,000</b>
Other Information	
Total Square Footage:	5,000
Estimated Useful Life:	25

Related Annual Operating Budget Expenditures / Savings Estimates		
Expenditures	Savings	
Permanent Personnel Services (a)		
Other Personnel Services (b)		
Current Expense (c)		
Equipment (d)		
Travel (e)		
Other (f)		
<b>Total Expenditures / Savings Estimates</b>		
Accounting Unit:		
Will these amounts be consistent each year?		
Capital Budget Criteria (See Instructions)		
Requirement Code: , C or D	<b>B</b>	
Definition Code: , D, or X	<b>B</b>	
Funding Percentages by Source:	<b>H</b>	100.00%
G = General		
F = Federal		
H = Highway		
O = Other		
An Information Technology Project must be part of your IT Plan. Project #		

**Const**  
Engineering to construct addition to District 5 Highway Maintenance Patrol Section PS527 facility in Manchester. Current facility is under sized to meet level of service requirements. Current facility is not capable of storing current maintenance vehicles.

Preliminary Plans: Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

<b>Contact Name:</b>	Richard Radwanski - District 5 Engineer	<b>Telephone Number:</b>	666-3336
<b>Name:</b>	Victoria F. Sheehan	<b>Commissioner</b>	<i>Victoria F. Sheehan</i>
		<b>Date:</b>	5/16/16

**PROJECT NAME: Manchester 527 – Patrol Shed Renovation/Addition****1) Why the project is necessary:**

The existing PS527 Manchester facility is under sized, to meet level of service requirements especially given the I-93 Expansion project. The existing facility is not capable of storing current maintenance vehicles including brine trucks. The existing facility does not meet modern building codes, is considered obsolete, and potentially unsafe. Recent facility improvements to reduce interior mold formation have significantly improved the facility's energy efficiency. The proposed renovation/addition can be sited on the existing property. Utility and computer system upgrades are included.

**2) What the project is replacing or adding on to:**

This project will construct new crew quarters, bathrooms, foremen office, and two new vehicle storage bays for brine tanker trucks used to pre-treat roadways before a winter storm. The crew currently includes 11 full-time NH DOT District 5 employees which are supplemented for winter maintenance by up to 5 temporary NH DOT borrowed employees, and 8 hired trucks with an operator. The current facility is too small to allow for crew members to take a break without using space not intended for that purpose. The current facility has one bathroom which is not adequate for the regular crew size, and especially in the winter. Currently the foreman uses a closet as an office which is not secure or conducive for employee relations.

In the winter, the brine tanker trucks are stored inside at the PS511 Bedford facility to reduce the potential freeze-up of dispensing systems if stored outside. If a winter storm requires pre-treatment, then the crew needs to bring the operators to Bedford before the work can begin. Trucks equipped with dry rock salt pre-wet systems can freeze-up when stored outside. Newer plow trucks equipped with vehicle emissions controls can also have temperature related issues if not stored in an above freezing environment.

**3) A brief description of what the project includes**

The project will include right-sizing the crew quarters, bathrooms, foremen office to meet current building code requirements. Architectural/engineering analyses will define the addition dimensions and utility accommodations. This addition to the building can be made on the west end of the existing structure.

The addition of 2 truck storage bays to the east end of the current structure is also planned. These will match the current building size and configuration with each bay being approximately 20-feet by 50-feet with an overall addition of approximately 40-ft wide by 50-ft deep. Two overhead garage doors are proposed for each bay to allow for trucks to pull through reducing backing accidents.

No salt storage or spreader storage buildings, or fuel dispensing improvement are proposed.

**4) Any back up information**

Attached are recent photographs of the existing facility for reference.





PS527 Manchester Perspective View Looking East



PS527 Manchester Perspective View Looking North



PS527 Manchester Perspective View Looking West



PS527 Manchester Perspective View Looking South





PS527 Manchester Interior View Looking East



PS527 Manchester Interior View Looking West



PS527 Manchester Interior View Supplemental Crew Quarters with Electrical Panels



PS527 Manchester Interior View Bathroom and crew quarters (for 11 DOT full-time employees + 10 additional employees in winter from hired equipment operators or borrowed NH DOT employees).



**STATE OF NEW HAMPSHIRE**  
**CAPITAL IMPROVEMENT PROJECT REQUEST**  
**FISCAL YEARS 2018-2019**

**PRIORITY #** 5

**Section 2 II-E**

**FORM 1A**

<b>AGENCY</b>	<b>CODE</b>	<b>NAME</b>
	096	New Hampshire Department of Transportation
<b>ACTIVITY / DIVISION</b>	960515	Highway Maintenance District 1
<b>PROJECT-TITLE / NAME</b>		Dixville 103D - New Patrol Shed Facilities

<b>Capital Budget Request</b>	
Site Acquisition (a)	
Site Improvement / Preparation (b)	125,000
Construction (c)	735,000
Utilities (d)	15,000
Architect / Engineering (e)	125,000
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
<b>Total Capital Budget Request</b>	<b>1,000,000</b>

<b>Other Information</b>	
Total Square Footage:	3500 sf
Estimated Useful Life:	25

<b>Related Annual Operating Budget Expenditures / Savings Estimates</b>	
<b>Expenditures</b>	<b>Savings</b>
Permanent Personnel Services (a)	
Other Personnel Services (b)	
Current Expense (c)	15,214
Equipment (d)	
Travel (e)	
Other (f)	
<b>Total Expenditures / Savings Estimates</b>	
Accounting Unit: 3007 Highway Maintenance	
Will these amounts be consistent each year?	Yes

<b>Capital Budget Criteria (See Instructions)</b>	
Requirement Code: , C or D	B
Definition Code: , D, or X	A
Funding Percentages by Source:	H
G = General	F, H, O
H = Highway	G, F, H, O
O = Other	O
An Information Technology Project must be part of your IT Plan. Project #	

**Project Justification (Be Concise)**

Construct new Highway Maintenance Patrol Section Facilities in Dixville. The current facilities need to be relocated to a new location to accommodate the planned redevelopment of the Balsams resort in Dixville. The department has received a grant from the Northern Border Regional Commission to pay 25% up to \$250,000 of the relocated cost of the relocated facility.

Preliminary Plans: Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

**Contact Name:** Philip Beaulieu - District 1 Engineer  
**Name:** Victoria F. Sheehan **Commissioner**

**Telephone Number:** 788-4641  
**Date:** 5/16/18

**1) Why the project is necessary:**

The existing facilities need to be relocated to a new location to accommodate the planned redevelopment of the Balsams Resort in Dixville. The patrol shed is a satellite facility for the Errol 103 patrol shed, however is critical to the Departments ability to maintain current winter service levels along NH 26 on each side of Dixville Notch due to the severe winter weather in this patrol area.

The department has received a grant from the Northern Border Regional Commission to pay 25% up to \$250,000 of the costs for a relocated facility.

**2) What the project is replacing or adding on to:**

This project will construct a new right sized facility that will include vehicle storage bays for at least 2 trucks, crew quarters, bathroom and office space. The project will also include a new salt shed to accommodate storage of at least 1-years' worth of salt. The facilities will be located on a new property and will require some site work to develop the new parcel.

**3) A brief description of what the project includes**

The project will include an approximately 3,000sf maintenance building that meets current building code requirements and about 2,500sf salt building. Architectural/engineering analyses will define the building dimensions and utility accommodations similar to recent replacement NH DOT Highway Maintenance Facilities.

**4) Any back up information**

Photo 1: View of front corner of existing building.





Photo 2: View of front of existing facility looking from country club road.

**STATE OF NEW HAMPSHIRE**  
**CAPITAL IMPROVEMENT PROJECT REQUEST**  
**FISCAL YEARS 2018-2019**

Section 2 II - F

FORM 1A

PRIORITY # **8**

AGENCY	CODE	NAME
ACTIVITY / DIVISION	096	New Hampshire Department of Transportation
PROJECT-TITLE / NAME	960515	Division of Operations
		Statewide - Equipment

Capital Budget Request	
Site Acquisition (a)	
Site Improvement / Preparation (b)	
Construction (c)	
Utilities (d)	
Architect / Engineering (e)	
Computer Systems / Equipment (f)	
Hardware	
Software	
Training	
Service	
Furnish / Equipment (g)	
Other (h)	
<b>Total Capital Budget Request</b>	<b>10,000,000</b>

Other Information	
Total Square Footage:	
Estimated Useful Life:	<b>&gt; 10 years</b>

Related Annual Operating Budget Expenditures / Savings Estimates	
Expenditures	Savings
Permanent Personnel Services (a)	
Other Personnel Services (b)	
Current Expense (c)	
Equipment (d)	
Travel (e)	
Other (f)	
<b>Total Expenditures / Savings Estimates</b>	<b>1,642,386</b>
Accounting Unit: 3007 Highway Maint.	<b>1,642,386</b>
Will these amounts be consistent each year?	Yes

Capital Budget Criteria (See Instructions)	
Requirement Code: B, C or D	<b>B</b>
Definition Code: C, D, or X	<b>D</b>
Funding Percentages by Source:	<b>H</b>
G = General	
F = Federal	
H = Highway	
O = Other	
An Information Technology Project must be part of your IT Plan.	

Const

To support the Department's \$85 million fleet, \$10,000,000 shall be provided to purchase equipment with a useful life of 10 years or greater and shall not be used to purchase passenger cars or 1/2 ton or 3/4 ton pickup trucks. As of July 1, 2015 approximately 51% of the fleet exceeded target life and usage. The Department estimates an investment of \$8.5 million in the fleet annually will maintain current levels. This \$10 million investment will help meet that goal.

Preliminary Plans: Attach a schematic and location sketch when applicable on an 8-1/2" x 11" sheet.

Contact Name: Victoria F. Sheehan  
 Name: Victoria F. Sheehan  
 Commissioner

Telephone Number: 271-1486  
 Date: 5/16/16



# Fleet Replacement Value & Historic Investment

Mechanical Services Equipment Acquisition Appropriation/Investment History									
Fiscal Year	1/2 Ton Pick-up	3/4 Ton Pick-up	6-wheel Cab & Chassis	10-Wheel Cab & Chassis	Class 30 Appropriations	Actual Encumbrance	Actual Expenditures (Lawson)	Lapse or Reductions	Comments
2000	\$12,623	\$18,656	\$37,678	\$61,866	\$5,111,258	\$5,108,744			
2001	\$12,369	\$18,885	\$37,638	\$58,422	\$4,946,491	\$4,946,174			
2002	\$12,597	\$15,615	\$41,417	\$60,143	\$5,573,156	\$5,574,531			
2003	\$11,880	\$16,753	\$50,195	\$78,815	\$7,282,539	\$7,277,488			
2004					\$4,458,464	\$0		\$4,458,464	Mandated Freeze - Governor Benson
2005	\$11,500	\$19,200	\$55,299	\$98,710	\$4,643,206	\$4,627,708			
2006	\$12,540	\$18,331	\$55,333	\$91,846	\$4,500,000	\$4,499,939			
2007	\$12,741	\$18,887	\$58,634	\$89,042	\$4,500,000	\$4,502,456			
2008					\$3,500,000	\$41,436		\$3,458,564	Internal lapse - Hwy. Fund Deficit
2009		\$19,890	\$71,988	\$117,916	\$3,500,000	\$2,127,373		\$1,372,627	Internal lapse - Hwy. Fund Deficit
2010	\$14,769	\$19,940	\$74,581	\$109,544	\$3,510,000	\$3,493,148			
2011	\$14,829	\$19,807	\$83,073	\$116,225	\$3,500,000	\$6,460,434			\$2.99 M Transferred from the Highway Fund
2012			\$87,391	\$116,225	\$2,702,384	\$2,702,218			
2013		\$22,100	\$93,727	\$117,670	\$2,937,985	\$2,602,832		\$335,000	Lapse - Chapter 223:19, II Laws of 2011
2014		\$21,570	\$92,269	\$124,673	\$2,500,000	\$2,694,753		\$205,000	Transfer from Org. 3035 Bureau of Construction
2015		\$24,716	\$90,220	\$125,600	\$2,800,000	\$3,941,801			\$1,142,000 Transferred from the Highway Fund
2016	\$18,712	\$24,668			\$2,000,000	\$6,990,327			\$5.0 M of Bonded Funds Were Added: Chapter 220, Laws of 2015 (HB25), 04-096-096-960030-82930000-034
					\$31,450,369	\$35,556,778		\$5,371,191	

The Department has established target funding requests for equipment replacement to be approximately 10% of the fleet value per year. For Fiscal Year 2016, \$8.5 million was requested and represents 10% the fleet value (approx. \$85.1m) as of July 1, 2015. Over the past 10 years the Department's fleet investment was limited to \$35.5 million or 42% of the desired amount.

## Assumptions:

1. Class 30 Appropriations = Original Appropriations through the Highway Fund : 04-96-96-960515-30050000-030
2. Actual Expenditure amounts in each Fiscal Year may differ from Actual Encumbered amounts due to time required from the date a purchase order is issued to the date of delivery for each fleet unit
3. Fleet Value is calculated from the approx. replacement costs for all the active equipment.

## Fleet Parameters:

### Samples of Fleet: Age and Usage

**As of July 1, 2016: Fleet of 1,208 units with a replacement value estimated to be \$90,8 million.**

Description	Number	Value (millions)	Ave. Age (years)	AGE (years)				Usage (miles)			Usage (Hours)		
				# > 7	# > 10	# > 12	# > 15	# > 150K	# > 180K	# > 200K	# > 10K	# > 12K	# > 15K
Extra Heavy Trucks	70	\$12.7	10.2	46	37	28	11	19	14	11	3		
Heavy Trucks	260	\$39.1	8.1	134	122	88	18	75	38	15	31	2	
Medium Trucks	55	\$4.3	9.5	33	26	24	1	19	14	7	1		
Mobile Equipment	149	\$19.2											
Graders	20	\$6.2		20	20	14	12				5	4	1
Loaders	44	\$7.3		44	36	19	13				7	3	
Tractor/Loaders	27	\$1.8		27	23	23	11						
<b>Totals</b>				<b>304</b>	<b>264</b>	<b>196</b>	<b>66</b>	<b>113</b>	<b>66</b>	<b>33</b>	<b>47</b>	<b>15</b>	<b>1</b>
Light Duty Trucks													
1/2 Ton Pick-ups	101	\$1.9	6.4	50	9			31	10	5			
LDT1 - Other	6	\$0.2	8.9	4	4			0	0	0			
3/4 Ton Pick-ups	160	\$4.1	4.2	62	11	6	1	60	30	22			
LDT2 - Other	23	\$0.7	10.5	19	10	7	4	15	10	8			
Passenger Cars	113	\$2.0	7.8	73	35	2		48	28	12			
Vans													
<8 Passenger	4	\$80K	9.6	3	3								
9-20 Passenger	1	\$26K	14.3	1	1	1		1					
E-350 Aerial	3	\$225K	9	3				3	3	3			
Cargo	5	\$130K	8.2	3	2			3	3	1			
<b>Totals</b>				<b>218</b>	<b>75</b>	<b>16</b>	<b>5</b>	<b>161</b>	<b>84</b>	<b>51</b>			

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**Fiscal Year 2017 Fleet Statistics as of July 1, 2016**  
**Replacement Evaluation Criteria**  
**Attachment 3**

Effective 7/1/2016, revised 9/12/2016

Category	Category Description	A Expected Age	B Expected Usage Primary	C Expected Usage Secondary	D # Units	E Approx. Replacement Costs (Total x H)	F # Exceeds Life Age or Usage	G % of Fleet Exceeding Parameters	H Approx. Replacement Costs	I Current Replacement Sub Totals (F x H)	J Current Replacement Class Totals (Sum of I)	K Target Funding Level / Yr. (D/A x H)
0963800	MECHANICAL SERVICES				1208		442	37%				
EHD1	Trucks_ExtraHeavy Duty > 46000#				70	\$ 12,700,000	27	38%			\$ 5,228,000	
19009	HD CRANE-H400	15	8,000 H	250,000 M	1	\$ 250,000	1	100%	\$ 250,000	\$ 250,000		\$ 16,667
19010	BRIDGE INSPECTOR	15	8,000 H	250,000 M	1	\$ 875,000	1	100%	\$ 875,000	\$ 875,000		\$ 45,000
55012	OVER 5 TON TRUCKS	12	12,000 H	250,000 M	59	\$ 10,325,000	18	31%	\$ 175,000	\$ 3,150,000		\$ 860,417
55013	STRIPER TRUCKS	15	12,000 H	250,000 M	5	\$ 750,000	4	80%	\$ 150,000	\$ 600,000		\$ 50,000
55014	TRACTOR TRUCKS	15	12,000 H	250,000 M	3	\$ 450,000	2	67%	\$ 150,000	\$ 300,000		\$ 30,000
61018	EDUCTORS	15	10,000 H	250,000 M	1	\$ 250,000	1	100%	\$ 250,000	\$ 250,000		\$ 16,667
MDT	Trucks_Heavy Duty > 20001#				260	\$ 39,690,000	77	30%			\$ 11,610,000	
55011	3 TO 5 TON TRUCKS	12	12,000 H	180,000 M	257	\$ 38,550,000	76	30%	\$ 150,000	\$ 11,400,000		\$ 3,212,500
55021	CAR CARRIERS/WRECKERS	15	180,000 M	12,000 H	1	\$ 150,000	0	0%	\$ 150,000	\$ -		\$ 10,000
61022	PAINT VANS	15	180,000 M	12,000 H	1	\$ 110,000	1	100%	\$ 110,000	\$ 110,000		\$ 7,333
61033	MOBIL CORE DRILL	15	12,000 H	150,000 M	1	\$ 250,000	0	0%	\$ 250,000	\$ -		\$ 16,667
MDT	Trucks_Medium Duty > 10001#				56	\$ 4,310,000	33	60%			\$ 2,665,000	
55009	1 TO 1-1/2 TON TRUCKS	8	150,000 M	0 H	49	\$ 3,920,000	28	57%	\$ 80,000	\$ 2,240,000		\$ 653,333
55010	PATROL TRUCKS	10	12,000 H	150,000 M	6	\$ 390,000	5	83%	\$ 65,000	\$ 325,000		\$ 39,000
LDY1	Trucks_Light Duty < 8501#				107	\$ 2,076,000	61	48%			\$ 1,010,000	
55008	1/2 TON PICKUPS	7	150,000 M	0 N	101	\$ 1,918,000	46	45%	\$ 19,000	\$ 874,000		\$ 274,143
55016	CARGOBOX TRUCKS - 1/2 TO 8500 LBS	7	150,000 M	0 N	1	\$ 26,000	1	100%	\$ 26,000	\$ 26,000		\$ 3,714
55022	SUVS - 1/2 TO 8500 LBS	7	150,000 M	0 N	1	\$ 50,000	1	100%	\$ 50,000	\$ 50,000		\$ 7,143
56001	VANS/BUSES - 1/2 TO 8 PASSENGERS CAPACITY	7	150,000 M	0 N	4	\$ 80,000	3	75%	\$ 20,000	\$ 60,000		\$ 11,429
LDY2	Trucks_Light Duty < 8501#				183	\$ 4,778,000	58	32%			\$ 1,571,000	
55015	3/4 TON PICKUPS	7	150,000 M	0 N	160	\$ 4,080,000	42	26%	\$ 25,500	\$ 1,071,000		\$ 582,857
55017	CARGOBOX TRUCKS - 8501 LBS TO 10000 LBS	10	150,000 M	0 N	5	\$ 130,000	3	60%	\$ 26,000	\$ 78,000		\$ 13,000
55023	SUVS - 8501 LBS TO 10000 LBS	10	150,000 M	0 N	13	\$ 390,000	9	69%	\$ 30,000	\$ 270,000		\$ 39,000
61027	UTILITY VEHICLES	10	150,000 M	0 N	3	\$ 128,000	3	100%	\$ 42,000	\$ 126,000		\$ 12,600
61028	ROAD ANALYSIS VEHICLES	10	150,000 M	0 N	2	\$ 52,000	1	50%	\$ 26,000	\$ 26,000		\$ 5,200
PASSAUT	Passenger Autos_				113	\$ 2,007,500	71	63%			\$ 1,278,500	
61024	COMPACT SEDANS	7	150,000 M	0 N	19	\$ 313,500	1	5%	\$ 16,500	\$ 16,500		\$ 44,788
61025	MID SIZE SEDANS	7	150,000 M	0 N	93	\$ 1,574,000	69	74%	\$ 18,000	\$ 1,242,000		\$ 239,143
61026	FULL SIZE SEDANS	7	150,000 M	0 N	1	\$ 20,000	1	100%	\$ 20,000	\$ 20,000		\$ 2,857
VB1	Vans & Buses_1 seats 9-20				1	\$ 26,000	1	100%			\$ 26,000	
56002	VANS/BUSES - 9 TO 20 PASSENGERS CAPACITY	10	150,000 M	0 N	1	\$ 26,000	1	100%	\$ 26,000	\$ 26,000		\$ 2,600
MEC	Mobile Equipment_Construction				149	\$ 19,232,000	116	77%			\$ 14,380,000	
11001	COMPRESSORS	10	7,500 H	0 N	24	\$ 384,000	22	92%	\$ 16,000	\$ 352,000		\$ 38,400
19008	YARD CRANES	15	8,500 H	0 N	5	\$ 875,000	2	40%	\$ 135,000	\$ 270,000		\$ 45,000
25001	MOTOR GRADERS	13	12,000 H	0 N	20	\$ 6,200,000	14	70%	\$ 310,000	\$ 4,340,000		\$ 476,923
25003	MAINTAINERS	12	10,000 H	0 N	1	\$ 240,000	1	100%	\$ 240,000	\$ 240,000		\$ 20,000
33002	WHEELED LOADERS	12	12,000 H	0 N	44	\$ 7,260,000	36	82%	\$ 165,000	\$ 5,940,000		\$ 805,000
43001	SELF PROPELLED SWEEPERS	10	9,000 M	100,000 H	2	\$ 500,000	2	100%	\$ 250,000	\$ 500,000		\$ 50,000
49001	TRACTOR/MOWERS	12	3,000 H	0 N	2	\$ 100,000	2	100%	\$ 50,000	\$ 100,000		\$ 8,333
49002	TRACTOR/LOADERS	12	6,000 H	0 N	27	\$ 1,755,000	23	85%	\$ 65,000	\$ 1,485,000		\$ 148,250
49003	TRACTOR/LOADER/BACKHOES	12	10,000 H	0 N	5	\$ 550,000	5	100%	\$ 110,000	\$ 550,000		\$ 45,833
49007	FORK LIFTS	12	6,000 H	0 N	3	\$ 150,000	2	67%	\$ 50,000	\$ 100,000		\$ 12,500
49013	SKID STEER LOADERS	12	5,000 H	0 N	9	\$ 495,000	2	22%	\$ 55,000	\$ 110,000		\$ 41,250
56001	TRAILER WELDERS	15	5,000 H	0 N	1	\$ 10,000	1	100%	\$ 10,000	\$ 10,000		\$ 667
61003	CORE DRILLS	15	12,000 H	0 N	5	\$ 900,000	2	40%	\$ 180,000	\$ 360,000		\$ 60,000
61020	BOILER AND STEAM CLEANER	20	10,000 H	0 M	1	\$ 13,000	1	100%	\$ 13,000	\$ 13,000		\$ 650
TRE	Trailers_Equipment -Flatbed				9	\$ 90,000	9	100%			\$ 90,000	
53002	TRAILERS	10	10,000 H	180,000 M	9	\$ 90,000	9	100%	\$ 10,000	\$ 90,000		\$ 9,000
TRENC	Trailers_Enclosed				2	\$ 50,000	0	0%			\$ 25,000	
53007	BOX TRAILERS	10	0 H	0 M	2	\$ 50,000	1	50%	\$ 25,000	\$ 25,000		\$ 5,000
AE	Associated Equipment_				259	\$ 6,485,000	1	0%			\$ 20,000	
61002	SLIDE-IN SPREADERS	40	12,000 H	0 N	257	\$ 6,425,000	0	0%	\$ 25,000	\$ -		\$ 160,825
61076	SELF PROPELLED SCISSORS LIFT	10	H	N	2	\$ 40,000	1	50%	\$ 20,000	\$ 20,000		\$ 4,000
Total=						\$ 90,793,500			Total=		\$ 37,709,600	\$ 7,925,486

Notes: Approx. acquisition costs paid to purchase the current fleet \$80.7 million  
 Approx. depreciated value of the current fleet \$38.2 million  
 Column J: Target Funding Level / Yr. represents a per year requirement for equipment replacement based on expected life.

To catch up over time:

1 yr \$37,700,500  
 5 yrs \$7,540,100  
 10 yrs \$3,770,050  
 15 yrs \$2,513,367

The Fleet Statistics Table establishes criteria for fleet vehicles to be evaluated for potential replacement. The table also provides estimated replacement cost based of category description. Actual fleet units replaced are determined by field evaluations.



## Actual Unit Replacement:

While the Fleet Statistic spreadsheet shown above provides guidance as to which units need to be evaluated for potential replacement, the actual replacement can occur over a year from the date the appropriation is available. Shown below are the proposed trade unit's parameters that were effective through March 3, 2017. Some of these units are still in operation until the replacement unit arrives.

Examples of Units Schedule to be Replaced with Fiscal Year 2016 Funding  
Bureau of Mechanical Services

3/12/2017

CLASS	CATEGORY DESCRIPTION	Cat	Total	UNIT_NO	YEAR	MAKE	MODEL	LTD_USAGE	Type	LTD_USAGE2	Type	UnitAge	Expected Age
EHDT	OVER 5 TON TRUCKS			H0486D	2000	INT	SF2574 D/W	9,231.00	H	170,490.00	M	16.17	12
EHDT	OVER 5 TON TRUCKS			H1614D2D	2002	INT	SF2574/CRANE	8,700.00	H	87,389.00	M	14.67	12
EHDT	OVER 5 TON TRUCKS			H0461D2D	2004	INT	7600 SFA	12,163.00	H	254,050.00	M	13.33	12
<b>OVER 5 TON TRUCKS</b>			<b>3</b>				<b>Average</b>	<b>10,031.33</b>		<b>170,643.00</b>		<b>14.72</b>	
HDT	3 TO 5 TON TRUCKS			H0632D2D	2001	INT	4900	10,276.00	H	157,858.00	M	16.42	12
HDT	3 TO 5 TON TRUCKS			H0686D2D	2001	INT	4900	12,820.00	H	205,408.00	M	16.25	12
HDT	3 TO 5 TON TRUCKS			H0465D2D	2001	INT	4900	10,024.00	H	185,964.00	M	16.25	12
HDT	3 TO 5 TON TRUCKS			H1624D2D	2001	INT	4900	11,958.00	H	173,043.00	M	16.08	12
HDT	3 TO 5 TON TRUCKS			H0593D2D	2001	INT	4900	12,534.00	H	183,821.00	M	16.08	12
HDT	3 TO 5 TON TRUCKS			H0572D2D	2001	INT	4900	10,219.00	H	173,748.00	M	16.08	12
HDT	3 TO 5 TON TRUCKS			H0712D2D	2001	INT	4900	9,992.00	H	137,541.00	M	15.42	12
HDT	3 TO 5 TON TRUCKS			H0513D	2001	INT	4900	13,532.00	H	218,234.00	M	15.33	12
HDT	3 TO 5 TON TRUCKS			H0566D	2001	INT	4900	11,519.00	H	197,057.00	M	15.25	12
HDT	3 TO 5 TON TRUCKS			H0554D	2001	INT	4900	13,123.00	H	223,454.00	M	15.25	12
HDT	3 TO 5 TON TRUCKS			H0685D2D	2001	INT	4900	11,013.00	H	198,689.00	M	15.25	12
HDT	3 TO 5 TON TRUCKS			H0540D	2001	INT	4900	13,727.00	H	214,202.00	M	15.25	12
HDT	3 TO 5 TON TRUCKS			H0543D	2001	INT	4900	12,327.00	H	182,296.00	M	15.17	12
HDT	3 TO 5 TON TRUCKS			H0603D2D	2002	INT	4900 CREWCAB	7,941.00	H	136,932.00	M	14.42	12
HDT	3 TO 5 TON TRUCKS			H0499D2D	2004	INT	7400 SFA	8,392.00	H	145,829.00	M	13.42	12
HDT	3 TO 5 TON TRUCKS			D0533D2D	2004	INT	7400 SFA	10,025.00	H	202,832.00	M	13.42	12
HDT	3 TO 5 TON TRUCKS			H0570D2D	2004	INT	7400 SFA	8,971.00	H	166,441.00	M	13.33	12
HDT	3 TO 5 TON TRUCKS			H0631D2D	2004	INT	7400 SFA	12,090.00	H	200,811.00	M	13.17	12
<b>3 TO 5 TON TRUCKS</b>			<b>18</b>				<b>Average</b>	<b>11,137.94</b>		<b>183,564.44</b>		<b>15.10</b>	
MDT	1 TO 1-1/2 TON TRUCKS			H1538D2D	2000	FORD	F350 CONING	228,962.00	M	9,991.00	H	16.17	6
MDT	1 TO 1-1/2 TON TRUCKS			H1381D2D	2002	FORD	F350 CONING	192,989.00	M	9,334.00	H	14.83	6
MDT	1 TO 1-1/2 TON TRUCKS			H0349D2D	2006	FORD	F450 SIGNAL	273,267.00	M	7,921.00	H	10.42	6
MDT	1 TO 1-1/2 TON TRUCKS			H0386D2D	2008	FORD	F450 SIGN	256,729.00	M	9,263.00	H	9.58	6
<b>1 TO 1-1/2 TON TRUCKS</b>			<b>4</b>				<b>Average</b>	<b>237,986.75</b>		<b>9,127.25</b>		<b>12.75</b>	
LDT1	1/2 TON PICKUPS			H0325D2D	2001	CHEVROLET	C1500	187,833.00	M	0.00	N	15.75	7
LDT1	1/2 TON PICKUPS			H1311D	2002	CHEVROLET	C1500 W/CAP	169,639.00	M	0.00	N	14.92	7
LDT1	1/2 TON PICKUPS			H1910D2D	2002	CHEVROLET	C1500 W/CAP	170,066.00	M	0.00	N	14.92	7
LDT1	1/2 TON PICKUPS			H1957D2D	2005	CHEVROLET	C1500	183,164.00	M	0.00	N	11.75	7
LDT1	1/2 TON PICKUPS			H1523D2D	2005	CHEVROLET	C1500	196,300.00	M	0.00	N	11.67	7
LDT1	1/2 TON PICKUPS			H1517D	2005	CHEVROLET	C1500	210,740.00	M	0.00	N	11.67	7
LDT1	1/2 TON PICKUPS			H1515D	2005	CHEVROLET	C1500	235,935.00	M	0.00	N	11.67	7
LDT1	1/2 TON PICKUPS			H1349D2D	2005	CHEVROLET	C1500	228,220.00	M	0.00	N	11.67	7
LDT1	1/2 TON PICKUPS			H0324D2D	2005	CHEVROLET	C1500	175,797.00	M	0.00	N	11.17	7
LDT1	1/2 TON PICKUPS			H1978D2D	2006	FORD	F150	219,390.00	M	0.00	N	10.75	7
LDT1	1/2 TON PICKUPS			H1572D2D	2006	FORD	F150	223,706.00	M	0.00	N	10.58	7
LDT1	1/2 TON PICKUPS			H1976D2D	2007	FORD	F150	190,339.00	M	0.00	N	10.17	7
LDT1	1/2 TON PICKUPS			H1915D2D	2007	FORD	F150	222,177.00	M	0.00	N	10.08	7
LDT1	1/2 TON PICKUPS			H1308D2D	2007	FORD	F150	193,215.00	M	0.00	N	10.00	7
LDT1	1/2 TON PICKUPS			H0322D2D	2007	FORD	F150	184,200.00	M	0.00	N	10.00	7
LDT1	1/2 TON PICKUPS			H1958D2D	2007	FORD	F150	191,533.00	M	0.00	N	10.00	7
<b>1/2 TON PICKUPS</b>			<b>16</b>				<b>Average</b>	<b>198,890.88</b>				<b>12.75</b>	



**Examples of Units Schedule to be Replaced with Fiscal Year 2016 Funding**  
**Bureau of Mechanical Services**

3/12/2017

CLASS	CATEGORY DESCRIPTION	Cat	Total	UNIT_NO	YEAR	MAKE	MODEL	LTD_USAGE	Type	LTD_USAGE2	Type	UnitAge	Expected Age
LDT2	3/4 TON PICKUPS			H1563D2D	2002	CHEVROLET	2500HD/ XCAB	168,552.00	M	0.00	N	14.83	7
LDT2	3/4 TON PICKUPS			H1560D2D	2002	CHEVROLET	2500HD/ XCAB	175,763.00	M	0.00	N	14.58	7
LDT2	3/4 TON PICKUPS			H0356D2D	2003	CHEVROLET	2500HD/ XCAB	162,254.00	M	0.00	N	13.67	7
LDT2	3/4 TON PICKUPS			H1319D2D	2005	CHEVROLET	2500HD/ XCAB	270,895.00	M	0.00	N	11.67	7
LDT2	3/4 TON PICKUPS			H0312D2D	2006	CHEVROLET	2500HD/ XCAB	236,190.00	M	0.00	N	10.75	7
LDT2	3/4 TON PICKUPS			H1339D2D	2006	CHEVROLET	2500HD/ XCAB	164,531.00	M	0.00	N	10.67	7
LDT2	3/4 TON PICKUPS			H1391D2D	2006	CHEVROLET	2500HD/ XCAB	169,530.00	M	0.00	N	10.67	7
LDT2	3/4 TON PICKUPS			H1580D2D	2006	CHEVROLET	2500HD/ XCAB	243,950.00	M	0.00	N	10.58	7
LDT2	3/4 TON PICKUPS			H1386D2D	2006	CHEVROLET	2500HD/ XCAB	180,295.00	M	0.00	N	10.58	7
LDT2	3/4 TON PICKUPS			H1338D2D	2006	CHEVROLET	2500HD/ XCAB	209,325.00	M	0.00	N	10.58	7
LDT2	3/4 TON PICKUPS			H1596D2D	2008	FORD	F250 X-CAB	192,531.00	M	0.00	N	9.92	7
LDT2	3/4 TON PICKUPS			H1574D2D	2008	FORD	F250	206,929.00	M	0.00	N	9.83	7
LDT2	3/4 TON PICKUPS			H1387D2D	2008	FORD	F250 X-CAB	194,805.00	M	0.00	N	9.83	7
LDT2	3/4 TON PICKUPS			H0317D2D	2008	FORD	F250 X-CAB	195,588.00	M	0.00	N	9.75	7
LDT2	3/4 TON PICKUPS			H1543D2D	2008	FORD	F250 X-CAB	217,060.00	M	0.00	N	9.75	7
LDT2	3/4 TON PICKUPS			H1369D2D	2008	FORD	F250 X-CAB	270,236.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1578D2D	2008	FORD	F250 X-CAB	178,386.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1547D2D	2008	FORD	F250 X-CAB	168,790.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1590D2D	2008	FORD	F250 X-CAB	183,730.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H0339D2D	2008	FORD	F250 X-CAB	248,972.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1356D2D	2008	FORD	F250 X-CAB	195,875.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1597D2D	2008	FORD	F250 X-CAB	176,378.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1394D2D	2008	FORD	F250 X-CAB	174,955.00	M	0.00	N	9.67	7
LDT2	3/4 TON PICKUPS			H1359D2D	2008	FORD	F250 X-CAB	191,800.00	M	0.00	N	9.58	7
LDT2	3/4 TON PICKUPS			H1347D2D	2008	FORD	F250 X-CAB	176,852.00	M	0.00	N	9.58	7
LDT2	3/4 TON PICKUPS			H1532D2D	2008	FORD	F250 X-CAB	178,025.00	M	0.00	N	9.58	7
LDT2	3/4 TON PICKUPS			H1558D2D	2008	FORD	F250 X-CAB	172,439.00	M	0.00	N	9.50	7
LDT2	3/4 TON PICKUPS			H1367D2D	2008	FORD	F250 X-CAB	213,108.00	M	0.00	N	8.83	7
LDT2	3/4 TON PICKUPS			H1598D3D	2009	CHEVROLET	2500HD/ XCAB	177,744.00	M	0.00	N	7.58	7
LDT2	3/4 TON PICKUPS			H0323D2D	2009	CHEVROLET	2500HD/ XCAB	154,663.00	M	0.00	N	7.58	7
LDT2	3/4 TON PICKUPS			H1390D2D	2009	CHEVROLET	2500HD/ XCAB	193,755.00	M	0.00	N	7.50	7
LDT2	3/4 TON PICKUPS			H1545D2D	2009	CHEVROLET	2500HD/ XCAB	158,475.00	M	0.00	N	7.42	7
LDT2	3/4 TON PICKUPS			H0358D3D	2011	CHEVROLET	2500HD	176,548.00	M	0.00	N	6.42	7
LDT2	3/4 TON PICKUPS			H1357D3D	2011	CHEVROLET	2500HD	190,047.00	M	0.00	N	6.33	7
LDT2	3/4 TON PICKUPS			H1364D3D	2011	CHEVROLET	2500HD	171,808.00	M	0.00	N	6.33	7
LDT2	3/4 TON PICKUPS			H1585D3D	2011	CHEVROLET	2500HD	380,622.00	M	0.00	N	6.33	7
LDT2	3/4 TON PICKUPS			H1338D3D	2011	CHEVROLET	2500HD	188,505.00	M	0.00	N	6.25	7
LDT2	3/4 TON PICKUPS			H1595D3D	2011	CHEVROLET	2500HD	177,820.00	M	0.00	N	6.25	7
LDT2	3/4 TON PICKUPS			H1581D3D	2011	CHEVROLET	2500HD	165,139.00	M	0.00	N	6.25	7
LDT2	3/4 TON PICKUPS			H0335D3D	2011	CHEVROLET	2500HD	164,960.00	M	0.00	N	6.25	7
LDT2	3/4 TON PICKUPS			H1544D3D	2011	CHEVROLET	2500HD	161,120.00	M	0.00	N	6.17	7
LDT2	3/4 TON PICKUPS			H1385D3D	2011	CHEVROLET	2500HD	188,111.00	M	0.00	N	6.17	7
LDT2	3/4 TON PICKUPS			H1350D3D	2011	CHEVROLET	2500HD	148,470.00	M	0.00	N	6.00	7
LDT2	3/4 TON PICKUPS			H0301D3D	2011	FORD	F250 X-CAB	201,753.00	M	0.00	N	5.42	7
<b>3/4 TON PICKUPS</b>			<b>44</b>			<b>Average</b>		<b>193,574.64</b>				<b>9.01</b>	
PASSAUT	COMPACT SEDANS			H0237D2D	2003	HONDA	CIVIC HYBRID	198,138.00	M	0.00	N	14.17	7
PASSAUT	MID SIZE SEDANS			H0261D2D	2003	CHEVROLET	MALIBU	201,068.00	M	0.00	N	14.00	7
PASSAUT	MID SIZE SEDANS			H0007D2D	2003	CHEVROLET	MALIBU	175,741.00	M	0.00	N	13.92	7
PASSAUT	MID SIZE SEDANS			H0180D2D	2005	CHEVROLET	MALIBU	251,741.00	M	0.00	N	11.67	7
PASSAUT	MID SIZE SEDANS			H0135D2D	2005	CHEVROLET	MALIBU	238,700.00	M	0.00	N	11.67	7
PASSAUT	MID SIZE SEDANS			H0137D2D	2005	CHEVROLET	MALIBU	251,031.00	M	0.00	N	11.58	7
PASSAUT	MID SIZE SEDANS			H0141D2D	2005	CHEVROLET	MALIBU	196,317.00	M	0.00	N	11.58	7
PASSAUT	MID SIZE SEDANS			H0209D2D	2005	CHEVROLET	MALIBU	284,823.00	M	0.00	N	11.58	7
PASSAUT	MID SIZE SEDANS			H0096D2D	2005	CHEVROLET	MALIBU	177,639.00	M	0.00	N	11.58	7
PASSAUT	MID SIZE SEDANS			H0218D2D	2005	CHEVROLET	MALIBU	168,377.00	M	0.00	N	11.50	7
PASSAUT	MID SIZE SEDANS			H0262D2D	2005	CHEVROLET	MALIBU	186,024.00	M	0.00	N	11.42	7
PASSAUT	MID SIZE SEDANS			H0136D2D	2005	CHEVROLET	MALIBU	193,065.00	M	0.00	N	11.42	7
PASSAUT	MID SIZE SEDANS			H0193D2D	2006	CHEVROLET	MALIBU	254,119.00	M	0.00	N	10.83	7
PASSAUT	MID SIZE SEDANS			H0115D2D	2006	CHEVROLET	MALIBU	165,730.00	M	0.00	N	10.83	7
PASSAUT	MID SIZE SEDANS			H0182D2D	2006	CHEVROLET	MALIBU	199,200.00	M	0.00	N	10.83	7
PASSAUT	MID SIZE SEDANS			H0201D2D	2006	CHEVROLET	MALIBU	230,470.00	M	0.00	N	10.75	7
PASSAUT	MID SIZE SEDANS			H0282D2D	2006	CHEVROLET	MALIBU	216,243.00	M	0.00	N	10.58	7
PASSAUT	MID SIZE SEDANS			H0170D2D	2006	CHEVROLET	MALIBU	199,340.00	M	0.00	N	10.58	7
PASSAUT	MID SIZE SEDANS			H0219D2D	2006	CHEVROLET	MALIBU	227,109.00	M	0.00	N	10.42	7
PASSAUT	MID SIZE SEDANS			H0204D2D	2007	CHEVROLET	MALIBU	236,100.00	M	0.00	N	10.33	7
PASSAUT	MID SIZE SEDANS			H0195D2D	2007	CHEVROLET	MALIBU	200,728.00	M	0.00	N	10.33	7
<b>MID SIZE SEDANS</b>			<b>20</b>			<b>Average</b>		<b>211,986.76</b>				<b>11.60</b>	
MEC	MOTOR GRADERS			H0748D	1987	JOHN DEERE	672B	13,270.00	H	0.00	N	29.83	13
<b>MOTOR GRADERS</b>			<b>1</b>										
MEC	WHEELED LOADERS			H0782D	1998	JOHN DEERE	544H	13,379.00	H	0.00	N	18.50	12
<b>WHEELED LOADERS</b>			<b>1</b>										

Notes: \* = Totaled due to accident

Parameters effective through 3/10/2017

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## Repair Examples:



H319

2008 Ford F-450

252,755 miles

6,997 hours

In-service date 12/14/2007

Acquisition cost using re-mounted lift = \$50,418

Value based on M5 straight Line Depreciation: \$5,041.86

Cost of Heater Core Replacement: \$ 1,805 (Labor: \$1,403 = 34 hrs. & Parts \$401)

Age at heater core repair: 9.8 yrs.

Total Repair Costs to date including 2 replacement engines and 1 transmission: \$90,105.

\*This vehicle is currently getting the engine rebuilt 3/12/2017.



H638

2002 International 6 wheeled Plow Truck

160,271 miles

9,457 hours

In-service date 02/27/2003

Acquisition cost = \$91,564.58

Value based on M5 straight Line Depreciation: \$8,138.76

Cost of Rust Repair & Floor Replacement: \$7,385 (\$5,323 -148 hrs. labor / \$2,061 Parts)

Age at Repair: 12.7 yrs.

Total cost of rust repairs: \$25,602 (\$14,273 labor \$11,328 parts)

Total Maintenance /Repair Costs to date: \$98,016 (Labor 1,508.23 hrs/\$44,154, Commercial charges \$6,965, Parts & Materials \$46,897)





H306

2008 Ford F-250 Extended Cab

In-service date 07/13/2007

Age/miles at Repair: 7.4 years 169,576 miles

Acquisition cost = \$19,381

Date of Surplus: 12/10/2015

Miles at Surplus: 203,944

Cost of rust repair: \$2,736.49 (\$2,536 (74 hrs) labor / \$207.5 Parts)

Total Maintenance/Repair Costs to date: \$16,314.47 (308 hrs. \$8,806 labor & \$7,507 Parts)

Value at time of repair: \$7,325 (NADA Rough Trade-in)



H209 (in-house repair)

2005 Chevy Malibu

In-service date 08/11/2005

Age/miles at Repair: 8.5 years 219,139 miles

Acquisition cost = \$13,234

Cost of rust repair: \$2,971 (\$2,017 (72hrs) labor / \$954 Parts)

Value at time of repair: \$350 (NADA Rough Trade-in)

H128 (external repair for body work)

2007 Chevy Malibu

In-service date 12/7/2006

Age/miles at Repair: 8.3 years 148,628 miles

Acquisition cost = \$13,234

Cost of rust repair: \$2,541 (Private garage)

Cost of mechanical Repair: \$555 (\$303 – 11 hrs. labor & \$252 parts)

Value at time of repair: \$350 (NADA Rough Trade-in)













H750

2001 John Deere 672CH Motor Grader

3,805 hours

In-service date 12/12/2001

Acquisition cost = \$152,162

Value based on M5 straight Line Depreciation: \$30,433

Cost of Rust Repair & Radiator Replacement: \$20,940 (\$8,377 -228 hrs. labor / \$12,562 Parts)

Age at Repair: 14.8 yrs.

Total Maintenance /Repair Costs to date: \$106,798 (Labor 1,699 hrs/\$48,388, Commercial charges \$1,073, Parts & Materials \$57,337)





Comments: The municipal dump body was replaced with a flat bed due to corrosion.



#### Floor Replacement

H409

2002 International 7400 3-5 Ton Dump Truck

7,544 hours 143,162 miles

In-service date: 1/14/2003

Acquisition cost: \$86,616

Value based on M5 straight Line Depreciation: \$8,661

Date of Repair: 1/30/2017

Cost of Rust Repair: \$3,338.70 (\$2,968 -89 hrs. labor / \$370.55 Parts)

Age at Repair: 14.1 yrs.

Total Maintenance /Repair Costs to date: \$98,286 (Labor 1,845 hrs/\$55,574, Commercial charges \$70.5, Parts & Materials \$42,640)



# State of New Hampshire Treasury

## General Obligation Bond Amortization Schedule

for use as a template to estimate debt service for capital projects

PAY DATE	FISCAL YEAR	Principal 10,000,000	Interest	Principal & Interest	Fiscal Year Totals
11/01/18			250,000	250,000	
05/01/19	2019		250,000	250,000	500,000
11/01/19			250,000	250,000	
05/01/20	2020	666,667	250,000	916,667	1,166,667
11/01/20			233,333	233,333	
05/01/21	2021	666,667	233,333	900,000	1,133,333
11/01/21			216,667	216,667	
05/01/22	2022	666,667	216,667	883,333	1,100,000
11/01/22			200,000	200,000	
05/01/23	2023	666,667	200,000	866,667	1,066,667
11/01/23			183,333	183,333	
05/01/24	2024	666,667	183,333	850,000	1,033,333
11/01/24			166,667	166,667	
05/01/25	2025	666,667	166,667	833,333	1,000,000
11/01/25			150,000	150,000	
05/01/26	2026	666,667	150,000	816,667	966,667
11/01/26			133,333	133,333	
05/01/27	2027	666,667	133,333	800,000	933,333
11/01/27			116,667	116,667	
05/01/28	2028	666,667	116,667	783,333	900,000
11/01/28			100,000	100,000	
05/01/29	2029	400,000	100,000	500,000	600,000
11/01/29			90,000	90,000	
05/01/30	2030	400,000	90,000	490,000	580,000
11/01/30			80,000	80,000	
05/01/31	2031	400,000	80,000	480,000	560,000
11/01/31			70,000	70,000	
05/01/32	2032	400,000	70,000	470,000	540,000
11/01/32			60,000	60,000	
05/01/33	2033	400,000	60,000	460,000	520,000
11/01/33			50,000	50,000	
05/01/34	2034	400,000	50,000	450,000	500,000
11/01/34			40,000	40,000	
05/01/35	2035	400,000	40,000	440,000	480,000
11/01/35			30,000	30,000	
05/01/36	2036	400,000	30,000	430,000	460,000
11/01/36			20,000	20,000	
05/01/37	2037	400,000	20,000	420,000	440,000
11/01/37			10,000	10,000	
05/01/38	2038	400,000	10,000	410,000	420,000
		10,000,000	4,900,000	14,900,000	14,900,000

### Assumptions:

1. Bonds issued in the Fall of 2018.
2. This template assumes a fixed coupon of 5.0%
3. Actual coupon yields may be higher or lower.
4. Structured to accommodate first principal payment in the Spring of the year following the issuance.